

### Abstract

The present invention describes the synthesis of soluble copolymers containing multiple unsaturations. These copolymers contain reactive vinyl groups which can be further reacted in a second stage polymerization. The process involves copolymerization of a vinyl monomer with an inclusion complex of a monomer having multiple unsaturations and a cyclic macromolecular compound to yield soluble polymers. These polymers may be cast into films, membranes or may be converted in micro or nanoparticles and then crosslinked in a second step polymerization.